A NOTE ON *CREIIS PERICULOSA* (OLLIFF) (HOMOPTERA: PSYLLIDAE).

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(Seven Text-figures.)

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Synopsis.

The taxonomic status of *Psylla periculosa* Olliff (1894) has been examined. This species is now placed in the genus *Creiis* Scott, and a description based on specimens collected from *Eucalyptus rudis* at several localities in Western Australia is given.

In recent years a psyllid species in Western Australia has attracted increasing attention because of the damage it is causing to *Eucalyptus rudis* Endl., and an examination of the taxonomic status of this species has become necessary.

Mr. A. Sidney Olliff (1894) sent for exhibition at a meeting of the Linnean Society of New South Wales a number of specimens of a psyllid from Jarrahdale, W.A., which he proposed to call *Psylla periculosa*. The only description given was that it "makes elongate, semi-transparent, horny larval coverings, or tests, on the foliage of the Flooded Gum (*Eucalyptus rudis* Endl.)". However, this is sufficient to identify it as the same species (or as one of a complex) which is still "causing serious injury to its food-plant", and Olliff's name is valid on the basis of an "indication", according to the International Code of Zoological Nomenclature.

The species clearly belongs to the genus *Creiis* Scott, as defined by Tuthill and Taylor (1955).

The following description of the species is based on specimens collected from a number of localities in Western Australia, the host plant in each case being *Eucalyptus rudis*. Some variation in the characters is evident; thus specimens from some localities are larger than those from others. Series of specimens collected from *E. loxophleba* Benth. at Round Hill, W.A., and from *E. wandoo* Blakely at Wandering, W.A., appear to be conspecific. However, until studies can be made of the ecology and host relationships of this group of insects I prefer not to include the series from eucalypts other than *E. rudis* in *C. periculosa*. There is a possibility that more than one species is represented on *E. rudis*, but this also can best be resolved by ecological studies.

There is a complex of species closely related to *Creiis corniculata* (Froggatt) on *Eucalyptus* spp. in Eastern and Western Australia. Most of them are still undescribed, but my present knowledge of them leaves no doubt that their classification must be closely linked to their host relationships, as in the genera *Cardiaspina* Crawford (Taylor, 1962) and *Glycaspis* Taylor (Moore, 1961).

Genus Creiis Scott.

Creiis Scott, 1882, *Trans. Ent. Soc. Lond.*, 1882: 462; Tuthill and Taylor, 1955, p. 233.

Creiis periculosa (Olliff). (Figs 1–7.)

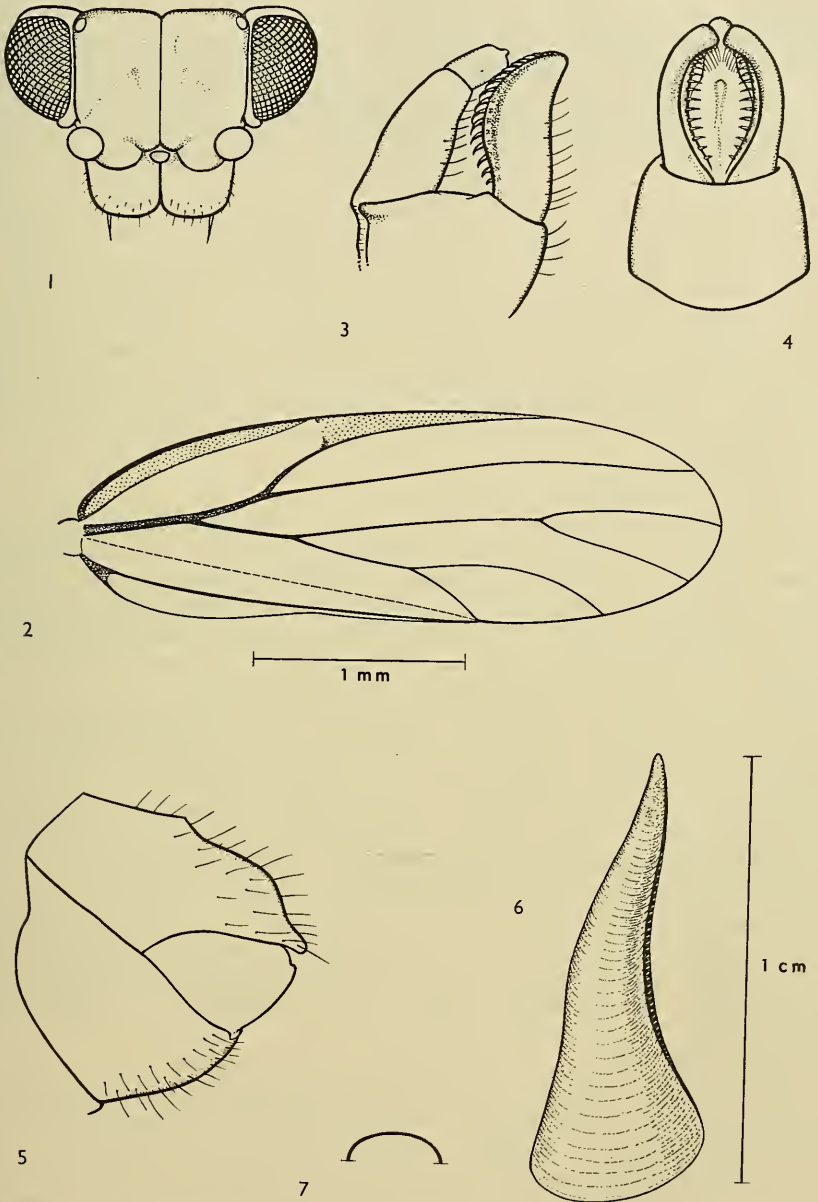
Psylla periculosa Olliff, 1894, p. 740.

Length (to tip of folded wings): ♀ *c.* 4·0 mm; ♂ *c.* 3·7 mm.

Colour: General colour light brown; patches of green in some specimens; forewings transparent with reddish brown veins; hindwings transparent.

Structure: Body surface finely punctate, shining; head (Fig. 1): width about equal to or slightly narrower than mesoscutum, at 90° to plane of body; vertex length about

¾ width, ocular sclerite with prominent lobe anteriorly between eye and antenna, narrow posteriorly but completely separating eye from vertex; genal processes about ⅓ length of vertex, broad and almost square apically, slightly separated at bases, one



Figs 1-7. *Creiis periculosa* (Olliff). 1, head; 2, forewing; 3, male genitalia, lateral aspect; 4, male genitalia, posterior aspect; 5, female genitalia, lateral aspect; 6, lerp, from above; 7, section of lerp (diagrammatic).

stout falcate seta towards outer side on each, and numerous small setae; antennal length about 2¼ times width of head; pronotum flat, length about ⅓ vertex, wider than vertex; forewings (Fig. 2): ratio of length to width about 3 : 1, transparent with numerous small points, veins prominent, raised, pterostigma large, weak, open; medial

and cubital cells about equal in area, medial elongate (less so in ♂), cubital triangular; hindwings large, length about $\frac{4}{5}$ that of forewings, with numerous small points, more so than forewings; metatibiae flaring apically with 1–3 stout blunt spurs on outer margin, 3–4 on inner margin; claws on proximal segment of metatarsus lacking or very small.

Male genitalia (Figs 3, 4): Proctiger long, pyriform in lateral aspect, slender in posterior aspect, bipartite, apical segment cylindrical, length about $1\frac{1}{2}$ times thickness; forceps falcate in lateral aspect, long and broad, curving strongly inwards to meet at apex, inner margin with a row of strong black setae, inwardly and downwardly directed, spaced more closely towards apex, posterior margin with a row of short pale setae.

Female genitalia (Fig. 5): Short, stout; dorsal plate pyriform in dorsal aspect, broad at base, with large orifice dorsally, tapering sharply to blunt, rounded apex, apical half with numerous long fine setae; ventral plate short, broad, deep, apical margin with a V-shaped depression, apical half with numerous long fine setae.

Lerp (Figs 6, 7): Corniculate, length approximately 1 cm., width from about 0·5 mm. at base to about 4 mm. at open end when adult emerges; narrow basal portion almost white, remainder pale yellow to pale brown, constructed by immature stages, width and height about leaf surface being increased as size of insect increases, hence a series of fine curved striations visible across the lerp; sides close to leaf surface for full length, not curved under.

Host plant: *Eucalyptus rudis* Endl.

Neotype ♂ (here designated): (Waterloo, W.A. 24.xi.1960, M. M. H. Wallace) in Australian National Insect Collection, C.S.I.R.O., Canberra, and labelled "Creiis periculosa (Olliff), K. L. Taylor 21.v.1964, NEOTYPE". Enquiries have been made at the Western Australian Museum, Perth; the Australian Museum, Sydney; the Macleay Museum, University of Sydney; and the New South Wales Department of Agriculture, Sydney. Olliff's specimens are not in any of these institutions, and no information can be obtained as to whether they have been deposited elsewhere.

The above description is consistent with Olliff's brief description, the host tree is the same, and the locality, though not identical, is reasonably close and very similar.

Specimens examined: Waterloo, W.A., 24.xi.1960, M.M.H.W. (10 ♀♀, 9 ♂♂); Noble Falls, W.A., 8.xi.1960, M.M.H.W. (10 ♀♀, 10 ♂♂); Wannamal, nr. Gin Gin, W.A., 26.x.1960, M.M.H.W. (8 ♂♂, 4 lerps); Mt. Barker, W.A., 20.x.1960, C. F. H. Jenkins (numerous nymphs and lerps); nr. Toodyay, W.A., 9.ix.1960, M.M.H.W. (2 ♀♀, 2 ♂♂, 1 lerp); Wongamine, W.A., 9.ix.1960, M.M.H.W. (1 ♀, 1 ♂).

Specimens from the series collected at Waterloo, W.A., will be deposited in the Western Australian Museum, Perth; South Australian Museum, Adelaide; Australian Museum, Sydney; National Museum of Victoria, Melbourne; British Museum (Natural History), London; United States National Museum, Washington. All other specimens in the Australian National Insect Collection.

The specimens from nr. Toodyay, Wongamine, and Wandering are larger than those from the other localities, and the relative proportions of different parts of the body are not quite the same in the limited number of specimens available. These differences may be due to variations in the host tree, and it would be unwise to describe them as a distinct species without further material and more detailed knowledge of their ecology. It is possibly significant that their date of emergence is much earlier in spring than that of the others listed. Specimens examined from other host trees in Western Australia (Round Hill, W.A., 15.ix.1960, M.M.H.W.—*E. loxophleba* (2 ♀♀, 1 ♂), and Wandering, W.A., 27.ix.1951, I. F. B. Common—*E. wandoo* (9 ♀♀, 1 ♂, 6 lerps), appear to be identical with this larger form.

This species is distinguished from *Creiis corniculata* (Frogg.) (the only species of this complex so far described) by the paler colour and smaller size of the lerp, the weaker pterostigma, and the host relationships.

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